

[0125] CLAIMS

What is claimed is:

1. An apparatus, comprising:
 - interpolator circuitry to proportion amplitude contributions of reference clock phases;
 - phase control circuitry coupled with said interpolator circuitry to adjust a proportion of the amplitude contributions based upon an interrelated control signal; and
 - output circuitry coupled with said interpolator circuitry to generate a phase of an interpolated clock signal with a substantially analog transition based upon a combination of the amplitude contributions.
2. The apparatus of claim 1, further comprising current circuitry coupled with said phase control circuitry to provide a static bias current.
3. The apparatus of claim 2, further comprising degenerative mesh circuitry coupled with said phase control circuitry to apportion the static bias current based upon the interrelated control signal.
4. The apparatus of claim 1, further comprising degenerative mesh circuitry coupled with said phase control circuitry to determine proportions of a bias current based upon a substantially differential portion of the interrelated control signal and another control signal.
5. The apparatus of claim 1, further comprising degenerative mesh circuitry coupled between a first circuit of said phase control circuitry and a second circuit of said phase control circuitry to degenerate an amplifier comprising the first circuit, the second circuit, and the degenerative mesh.
6. The apparatus of claim 1, further comprising substantially equivalent impedances coupled between more than two circuits of said phase control circuitry.

- 1 7. The apparatus of claim 1, wherein said interpolator circuitry comprises a current-
2 steering mechanism to generate a current from a particular one of the reference
3 clock phases with a bias current.
- 1 8. The apparatus of claim 1, wherein said interpolator circuitry comprises a
2 differential current-steering mechanism to steer a bias current between two
3 conductive paths based upon a substantially differential signal of the reference
4 clock phases.
- 1 9. The apparatus of claim 1, wherein said interpolator circuitry comprises a
2 differential current-steering mechanism to determine an amplitude contribution of
3 a particular one of the reference clock phases based upon an amplitude of a bias
4 current pulled through the differential current-steering mechanism.
- 1 10. The apparatus of claim 1, wherein said phase control circuitry comprises circuitry
2 coupled with said interpolator circuitry to adjust an amplitude of a bias current
3 based upon the interrelated control signal.
- 1 11. The apparatus of claim 1, wherein said phase control circuitry comprises a
2 conductive path coupled between a current source and a current-steering
3 mechanism to adjust a bias current in substantially linear proportion to a change in
4 the interrelated control signal.
- 1 12. The apparatus of claim 1, wherein said phase control circuitry comprises a
2 differential amplifier having an output for a bias current coupled to said
3 interpolator circuitry.
- 1 13. The apparatus of claim 1, wherein said output circuitry comprises circuitry to
2 combine amplitude contributions of a first phase and a second phase of the
3 reference clock phases.

1 14. The apparatus of claim 1, wherein said output circuitry comprises filtering
2 circuitry to filter the amplitude contributions of the reference clock phases.

1 15. The apparatus of claim 14, wherein the filtering circuitry comprises circuitry to
2 integrate the amplitude contributions of the reference clock phases.

1 16. The apparatus of claim 14, wherein the filtering circuitry comprises circuitry to
2 differentiate the amplitude contributions of the reference clock phases.

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- 1 17. A method, comprising:
2 receiving more than one phase of a reference clock signal;
3 receiving an interrelated control signal associated with a first phase and a
4 second phase of the more than one phase of the reference clock
5 signal;
6 proportioning an amplitude contribution of the first phase and an
7 amplitude contribution of the second phase, based upon the
8 interrelated control signal; and
9 combining the amplitude contributions of the first phase and the second
10 phase based upon said proportioning, to generate a phase of an
11 interpolated clock signal with a substantially analog transition.
- 1 18. The method of claim 17, further comprising filtering a combination of the
2 amplitude contributions of at least one phase of the more than one phase to output
3 the interpolated clock signal.
- 1 19. The method of claim 17, further comprising determining an output based upon a
2 substantially differential portion of the interrelated control signal and another
3 control signal.
- 1 20. The method of claim 17, wherein said receiving more than one phase of a
2 reference clock signal comprises receiving the first phase and the second phase,
3 wherein the first phase is less than 180 degrees from the second phase.
- 1 21. The method of claim 20, wherein said receiving an interrelated control signal
2 comprises receiving a first interrelated control signal associated with the first
3 phase and a second interrelated control signal associated with the second phase,
4 wherein the first interrelated control signal increases in amplitude at a
5 substantially equivalent rate that the second interrelated control signal decreases in
6 amplitude.

1 22. The method of claim 17, wherein said proportioning comprises increasing the
2 amplitude contribution of the first phase at substantially the same rate as
3 decreasing the amplitude contribution of the second phase.

1 23. The method of claim 17, wherein said combining comprises combining the
2 amplitude contributions of the first phase and the second phase, wherein
3 amplitude contributions of the first phase and the second phase are proportioned
4 based upon a voltage of the interrelated control signal.

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- 1 24. A system, comprising:
- 2 a phase controller to provide an interrelated control signal;
- 3 clock circuitry to provide reference clock phases; and
- 4 a phase interpolator coupled to said clock circuitry, comprising
- 5 interpolator circuitry to proportion amplitude contributions of
- 6 reference clock phases;
- 7 phase control circuitry coupled with the interpolator circuitry to
- 8 adjust the proportion of amplitude contributions based upon
- 9 the interrelated control signal; and
- 10 output circuitry coupled with the interpolator circuitry to generate a
- 11 phase of an interpolated clock signal with a substantially
- 12 analog transition based upon a combination of the
- 13 amplitude contributions.
- 1 25. The system of claim 24, further comprising degenerative mesh circuitry coupled
- 2 with the phase control circuitry to determine proportions of a bias current based
- 3 upon a substantially differential portion of the interrelated control signal and
- 4 another control signal.
- 1 26. The system of claim 24, wherein said interpolator circuitry comprises a
- 2 differential current-steering mechanism to determine an amplitude contribution of
- 3 a particular reference clock phase of the reference clock phases based upon an
- 4 amplitude of a bias current pulled through the differential current-steering
- 5 mechanism.
- 1 27. The system of claim 24, wherein said phase control circuitry comprises a
- 2 conductive path coupled between a current source and a current-steering
- 3 mechanism to adjust a bias current in substantially linear proportion to a change in
- 4 the interrelated control signal.
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1 28. A machine-readable medium containing instructions, which when executed by a
2 machine, cause said machine to perform operations, comprising:
3 receiving more than one phase of a reference clock signal;
4 receiving an interrelated control signal associated with a first phase and a
5 second phase of the more than one phase of the reference clock
6 signal;
7 proportioning an amplitude contribution of the first phase and an
8 amplitude contribution of the second phase, based upon the
9 interrelated control signal; and
10 combining the amplitude contributions of the first phase and the second
11 phase based upon said proportioning, to generate a phase of an
12 interpolated clock signal with a substantially analog transition.

1 29. The machine-readable medium of claim 28, wherein said proportioning comprises
2 increasing the amplitude contribution of the first phase at a substantially
3 equivalent rate as decreasing the amplitude contribution of the second phase.

1 30. The machine-readable medium of claim 28, wherein said combining comprises
2 combining the amplitude contributions of the first phase and the second phase,
3 wherein the first phase and the second phase are proportioned based upon a
4 voltage of the interrelated control signal.